

We claim:

1. A production method of biodegradable plastic comprising:

    using lactic acid as a raw material;  
    subjecting the lactic acid to condensation polymerization by dehydration under high temperature and reduced pressure in the presence of a metal catalyst; and  
    obtaining polylactic acid that is a main component of the biodegradable plastic.

2. A production method of biodegradable plastic comprising:

    using lactic acid as a raw material;  
    subjecting the lactic acid to condensation polymerization by dehydration under high temperature and reduced pressure in the presence of a metal catalyst;  
    releasing water vapor generated during the condensation polymerization by dehydration to the outside of the system;  
    determining the end point of the reaction by measuring the released amount of the water vapor concurrently with the release thereof; and  
    obtaining polylactic acid that is a main component of the biodegradable plastic.

3. The production method of biodegradable plastic according to claim 1 or 2, wherein the metal catalyst is zinc

chloride or/and stannous chloride.

4. The production method of biodegradable plastic according to claim 3, wherein the addition amount of the zinc chloride is from 0.1 to 0.3% by weight and the addition amount of the stannous chloride is from 0.1 to 1% by weight, when a combination of the zinc chloride and stannous chloride is used as the catalyst.

5. The production method of biodegradable plastic according to claim 1 or 2, wherein the temperature of the condensation polymerization by dehydration is from 180 to 220 °C and the degree of vacuum at the time of the condensation polymerization by dehydration is from -0.05 to -0.08 Mpa.

6. Production apparatus of biodegradable plastic comprising: an airtight container to put in lactic acid that is a raw material;

    a pressure reducing unit to reduce the pressure of the inside of the airtight container;

    a heating device to heat the airtight container; and

    a mixing device to mix lactic acid in the airtight container.

7. The production apparatus of biodegradable plastic according to claim 6, wherein a discharge cylinder having an outlet. in the airtight container is provided, a screw

shaft is coaxially provided in the discharge cylinder and polylactic acid in the airtight container is discharged through the outlet by the screw shaft when the outlet is open.